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ABSTRACT

The National Center on the Educational Quality of the Workforce (EQW) completed its first analysis of data from the EQW National Employer Survey of 4,625 establishments that was conducted in conjunction with the Census Bureau t document the practices and expectations of employers in their search for a skilled work force and that elicited 3,347 responses (72% response rate). Among the main findings of the analysis were the following: (1) restructuring of the economy has not led to a deskilling of work; (2) the use of high-performance work systems among employers still remains the exception rather than the rule; (3) virtually all establishments (97%) make some investment in formal or informal (on-the-job) training; (4) on average, establishments consider just over 80% of their workers to be fully proficient in their current jobs; (5) there is little evidence that establishments are making significant investments in remedial training or basic education; (6) although employers consider years of schools and skills certificates when making hiring decisions, they pay little attention to measurements of school performance. (Appended are tables detailing the response rates of different groups of employers and the distribution of survey sample by industry and establishment size.) (MN)

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ED 398 385

EQW RESULTS

First Findings from the EQW National Employer Survey

Designed by the National Center on the Educational Quality of the Workforce

Administered by the Bureau of the Census

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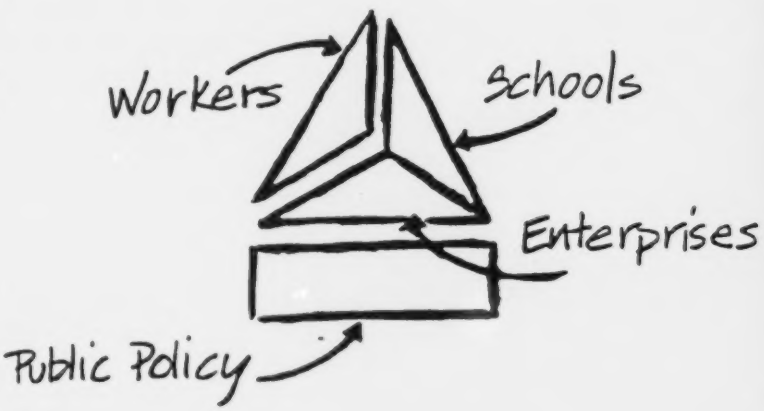
First Findings from the EQW National Employer Survey

A Reality Check

The National Center on the Educational Quality of the Workforce (EQW) has completed the first analysis of data from the EQW National Employer Survey (EQW-NES), conducted in conjunction with the Bureau of the Census. First findings from the EQW-NES provide nothing short of a "reality check," an opportunity to provide a baseline from which to document the practices and expectations of employers in their search for a skilled and proficient workforce. In a climate in which anecdote and best practice often serve as fact, the EQW-NES gives direct answers to direct questions, dispelling and corroborating some commonly touted beliefs about employer practices. As employers are increasingly asked to invest in more purposeful school-to-work transitions, the EQW-NES asks them to report their willingness to invest in workers' skills, to assess their current and future skill needs, and to indicate the extent to which they rely on partnerships with schools to supply the necessary skills of new workers.

Investigating the EQW Triangle

The EQW National Employer Survey grows out of the Center's envisioning of the EQW Triangle as the interaction of enterprises, schools, workers, and public policy and the roles these stakeholders have in the development of a skilled workforce. In its publications (*EQW Working Papers*, *EQW Policy Statements*, and *EQW ISSUES*) the Center has observed that responsibility for the quality of the workforce is widely distributed: among managers who must develop the skills of their employees, among schools that need to graduate workers who are well-prepared to function in today's economy, and among students and workers who need to become savvy educational shoppers.



In particular, the Center's research has consistently focused on the responsibility that enterprises have for improving the quality of the workforce. It is the enterprise that assigns employees specific tasks in order to draw a competitive advantage from their abilities and preparedness for work. Yet, it is this area—

the work-related strategies and practices of employers—about which policy makers know the least. Much of the debate about the quality of the workforce in general, and the school-to-work transition in particular, focuses on the successes and failures of schools, while giving scant attention either to what employers do or what employers want. The Center has attempted to fill this void by asking on the EQW-NES:

- Have employers really lowered the skill requirements for many of the jobs they offer?
- How much have the organization of work, employers' investments in new technology, and employers' practices actually changed?
- When employers invest in training, what kinds of instruction do they provide and from whom?
- Do employers think their workers are proficient in their current jobs?
- How important are grades, teachers' recommendations, the reputation of a school, or an applicant's level of schooling in the decision to hire?

Developing a Different Instrument

Because it was born out of the Center's approach to workforce and education issues, the EQW-NES differs from other national surveys in many ways.

- It focuses on the interaction of establishment practice, organizational structure, and workforce proficiency.
- It documents how employers satisfy their needs for skilled employees—in particular, it catalogues employer attitudes toward schools as likely suppliers of skilled employees.
- It goes beyond the simple measurement of the incidence of training to document other dimensions—the incidence of formal and informal training; training content; training intensity; training expenditures; and the distribution of training by occupational category.

Designed by Professor Lisa Lynch of the Fletcher School of Tufts University—working with EQW's Board of Senior Scholars, EQW Co-Directors Robert Zemsky and Peter Cappelli, and Nevzer Stacey of the School-to-Work Office and the Department of Education—the EQW-NES establishes a baseline for understanding when, how, and why employers invest in the skills of their workers.

Administered by the U.S. Bureau of the Census as a telephone survey in August and September of 1994 to more than 4,000 private establishments, the EQW-NES has a sampling frame that includes employers from both the manufacturing and non-manufacturing sectors. The survey over-sampled establishments in the manufacturing sector and those with more than 100 employees. Public-sector employers, non-profit institutions, establishments with less than 20 employees, and cor-

porate headquarters were excluded from the sample. Computer Assisted Telephone Interviewing (CATI) was used to administer each survey, which took approximately 28 minutes to complete. Two versions of the EQW-NES instrument were administered: one for establishments in the manufacturing sector and one for establishments in non-manufacturing. The surveys are virtually identical and differ only linguistically in places where the manufacturing and non-manufacturing sectors use different terms to describe comparable aspects of their businesses.

Appendix Table 1 reports final response rates for the survey. Four thousand six hundred twenty-five establishments were contacted and met the requirements of the sampling frame. Of these establishments, 3,347 participated in the survey, which represents a 72 percent response rate (not all contacted establishments completed the survey due to a final cutoff date for all interviews; see the Appendix for more details). However, the majority of the work presented here reflects a subsample of 3,173 establishments (69 percent of all contacted establishments) which provided complete information on employment practices. Appendix Table 2 presents the distribution of the sample by industry, stratified across 21 categories, and Appendix Table 3 presents the distribution of the sample by the number of employees within an establishment along 5 categories of establishment size.

First Results from the EQW-NES

In this Public Policy Seminar, we present employers' answers to many of the key questions asked by the EQW-NES. The questions and their answers are grouped into three broad categories which, like the EQW Triangle, link employers, workers, and educational suppliers: employer practices; employers' assessment of the nature and quality of their workers; and employers' use of schools and other educational suppliers. All of the rates reported in the tables that follow are weighted so that they are representative for all U.S. establishments with more than 20 employees in the industries covered by our survey.

Some of what the EQW-NES tells us adds definitive documentation to what many have previously argued or suspected about **Employer Practices**:

- The restructuring of the American economy has not led to a deskilling of work. Quite the contrary, only 5 percent of establishments indicated any reduction in the skill requirements of their jobs, while 56 percent reported increasing their skill requirements (see the "Skill Requirements" table).

- Despite the considerable attention given to new modes of work organization, the use of high-performance work systems among employers still remains the exception rather than the rule. Only one-quarter of establishments reported using any bench-marking programs to compare practices and performances with other organizations, and only 37 percent reported that they had adopted a formal Total Quality Management (TQM) program. Very few workers engage in arrangements that have become the hallmarks of high-performance work: only 12 percent of non-managerial workers participate in self-managed teams, and only 17 percent participate in job rotation. However, on average, 54 percent of non-managerial employees participate in regularly scheduled meetings to discuss work-related problems. Of employers who conduct regular meetings with non-managerial employees, over two-thirds reported that workers discuss working conditions and health and safety issues at these meetings, but only 42 percent of these

establishments allow non-managerial workers to discuss choices about new technology or equipment (see the "Work Organization" tables).

- The establishment that makes no training investment in at least some of its workers is a rarity. Virtually *all* establishments provide either formal or informal (on-the-job) training: 97 percent provide informal training, while 81 percent provide formal training. Indeed, over half (57 percent) of the establishments reported an increase in their formal training over the last three years (see the "Training" tables).

Employers' **Assessment of Employees** was more unexpected.

- On the average, establishments reported that just over 80 percent of their workers are fully proficient in their current jobs. The bad news is that one out of every five workers was judged to be not fully proficient, perhaps because he or she lacked the necessary skills or because the skill requirements of the job had increased (see the "Worker Proficiency" table).

- While the mean reported value of the percentage of employees with less than one year of tenure was 21 percent, the median value was slightly less than 10 percent. This finding reflects a modest growth in employment, but the large difference in the mean and median values indicates a marked difference across establishments in the degree of churning in their labor forces (see the "Employee Tenure" table).

In terms of their **Use of Schools**, employer responses represented mixed news.

- There is little evidence that establishments are making significant investments in remedial training or basic education (see the "Training" table in the section on **Employer Practices**).

- Although years of schooling and the skills certificates applicants possess are a factor in employers' screening and hiring decisions, they pay little attention to measurements of school performance. What is frankly more important to employers is how the applicant presents himself or herself—in terms of attitude and communication skills—and whether or not he or she has a successful history of previous work experience (see the "Recruitment" table in the section on **Assessment of Employees**).

I. Employer Practices

Skill Requirements

Percentage of Establishments That Have Increased, Decreased, or Not Changed Their Skill Requirements

Derived from Question 14: In the last three years, have the skills required to perform production or support jobs *(primary or front-line services or support jobs)* at an acceptable level increased, decreased, or remained the same in your establishment?

Change in Skill Requirements	%
Increased	57%
Decreased	5%
Remained the same	39%

Work Organization

Mean Percentage of Non-Managerial Workers Regularly Discussing Work-Related Problems

Derived from Question 49: What percentage of non-managerial and non-supervisory workers are involved in regularly scheduled meetings to discuss work-related problems?

Mean across establishments	**54%**

Percentage of Establishments Using TQM

Derived from Question 48: Has your establishment adopted a formal Total Quality Management program?

Percentage of establishments	**37%**

Percentage of Establishments Participating in Bench-Marking Programs

Derived from Question 47: Has your establishment participated in any bench-marking programs that compare practices and performances with other organizations?

Percentage of establishments	**25%**

Work Organization

Percentage of Non-Managerial Employees Involved in Job Rotation

Derived from Question 52: What percentage of non-managerial and non-supervisory employees are currently involved in job rotation?

Mean across establishments	**18%**

Percentage of Non-Managerial Employees Involved in Self-Managed Teams

Derived from Question 53: What percentage of non-managerial and non-supervisory employees are currently involved in self-managed teams?

Mean across establishments	**13%**

Computer Usage

Percentage of Non-Supervisory Workers Who Use Computers

Derived from Question 12: What percentage of your production and non-supervisory employees use computers in their jobs?

Mean across establishments	42%

Investment in Equipment

Age of Machinery and Equipment

Derived from Question 10: Approximately what percentage of your machinery or equipment used in production is:

Age of Equipment	Mean %
Less than 1-year-old	12%
Between 1- and 4-years-old	37%
Between 5- and 10-years-old	36%
More than 10-years-old	14%

Training

Percentage of Establishments Offering Formal Training

Derived from Question 18: Does your establishment pay for or provide any structured or formal training either on-the-job (by supervisors or outside contractors) or at a school or technical institute?

Percentage of Establishments	**81%**

Percentage of Establishments That Have Increased, Decreased, or Maintained Their Level of Formal Training

Derived from Question 29: In the last three years, has the amount of formal training provided to your workers increased, decreased, or remained the same? If there was an increase or decrease, by what percentage?

Formal Training Over Last 3 Years	%
Increased	**57%**
Decreased	**2%**
Remained the Same	**41%**

Training

Percentage of Establishments Offering Formal and Informal Training by Establishment Size

Formal Training Derived from Question 18: Does your establishment pay for or provide any structured or formal training either on-the-job (by supervisors or outside contractors) or at a school or technical institute?

Informal Training Derived from Question 19 (for establishments who do not provide formal training): Unstructured or informal training includes situations in which employees learn by observing others doing a job in an informal one-on-one situation. Does your establishment provide informal (in-plant) instruction by supervisors or co-workers?
or
Derived from Question 32b (for establishments who provide formal training): Unstructured or informal training includes situations in which employees learn by observing others doing the job or are shown how to do a job in an informal one-on-one situation. In addition to your formal training program, does your establishment provide informal (in-plant) instruction by supervisors and co-workers.

Number of Employees	Formal Training	Informal Training
All	81%	97%
20-49	75%	96%
50-99	82%	99%
100-249	90%	98%
250-999	90%	99%
More than 1000	99%	98%

Training

Relative Ranking of Amount of Time Establishments Spend on Various Types of Training
(0=None; 1=Little; 2=Some; 3=Most)

Derived from Question 28: Regarding your non-managerial and non-supervisory employees, how much of their time in formal training is spent performing activities in the following categories:

Type of Training	Rank
Training on the safe use of equipment and tools	1.7
Improving teamwork or problem-solving skills	1.5
Training in sales and customer service	1.5
Training to use computers and other new equipment	1.4
Remedial skills in literacy and arithmetic	0.4

II. Assessment of Employees

Worker Proficiency

Percentage of Employees Proficient at Their Jobs

Question 37: What percentage of your workers would you regard as being fully proficient at their current jobs?

Mean across establishments	80%

Percentage of Proficient Employees	% of Establishments
Less than or equal to 75 percent	32%
Greater than 75 and less than or equal to 85 percent	21%
Greater than 85 and less than or equal to 95 percent	27%
Greater than 95 percent	19%

Employee Tenure

Percentage of Employees with Less Than One Year of Tenure

Question 44: What percentage of your currently employed workers have been with the firm for less than one year?

Percentage of Employees with ≤ 1 Year of Tenure	% of Establishments
0 percent	10%
Greater than 0 and less than or equal to 5 percent	19%
Greater than 5 and less than or equal to 10 percent	20%
Greater than 10 and less than or equal to 20 percent	17%
Greater than 20 percent	34%

Recruitment

Relative Ranking of Factors in Making Hiring Decisions
(1=Not Important or Considered; 5=Very Important)

Derived from Question 57: When you consider hiring a new non-supervisory or production worker *(front-line worker)*, how important are the following in your decision to hire?

Applicant Characteristics	Rank
Applicant's attitude	4.6
Applicant's communication skills	4.2
Previous work experience	4.0
Recommendations from current employees	3.4
Previous employer recommendation	3.4
Industry-based credentials (certifying applicant's skills)	3.2
Years of completed schooling	2.9
Score on tests administered as part of the interview	2.5
Academic performance (grades)	2.5
Experience or reputation of applicant's school	2.4
Teacher recommendations	2.1

III. Use of Schools

Use of Schools as Training Sources

Percentage of Establishments Using Various Training Sources

Derived from Question 31: Does your establishment use any of the following outside sources of trainers?

Sources of Training	%
Equipment suppliers or buyers	50%
Private consultants	36%
Private industry councils or other industry associations	34%
Technical and vocational institutions	33%
Community and junior colleges	30%
Four-year colleges or universities	20%
Government-funded training programs	12%
Unions	5%

IV. Appendix

- Response Rate Table
- Distribution of Sample by Industry
- Distribution of Sample by Establishment Size

Table 1

EQW National Employer Survey Response Rates[1]

Manufacturing Sector	Percentage	Number of Cases
Completed + All Partials[2]	75.0%	1,831
Completed + Workplace Partials	70.4%	1,728
Completed Interviews	66.0%	1,621
Non-Manufacturing Sector		
Completed + All Partials	69.4%	1,516
Completed + Workplace Partials	66.2%	1,445
Completed Interviews	60.6%	1,324

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[1] Empirical analysis of the determinants of the probability of refusing to participate in the survey showed no significant impact of establishment size or industry on the probability of responding for the non-manufacturing sector. For manufacturing, establishments in the largest size category (1000 employees or more) were slightly more likely to refuse to participate in the survey than establishments in all other size categories.

[2] Since all interviews had to be completed by the end of September 1994, some of the surveys were not completed. The survey allowed for multiple respondents and was divided into two main sections: establishments' sales and financial information, and employment practices. The bulk of the survey's questions were contained in the employment practices section of the survey. Therefore, the final sample includes some partial interviews. Our analysis focuses on both the completed and the workplace partial interviews.

Table 2

Distribution of Sample by Industry

	Unweighted Percentage	Weighted Percentage
Manufacturing		
Food and Tobacco (SIC 20, 21)	5%	2%
Textile and Apparel (SIC 22, 23)	4%	2%
Lumber and Paper (SIC 24, 26)	6%	2%
Printing and Publishing (SIC 27)	5%	2%
Chemicals and Petroleum (SIC 28, 29)	6%	1%
Primary Metals (SIC 33)	6%	2%
Fabricated Metals (SIC 34)	5%	2%
Machinery & Computers, Electrical Machinery, and Instruments (SIC 35, 36, 38)	6%	4%
Transportation Equipment (SIC 37)	6%	1%
Miscellaneous Manufacturing (SIC 25, 30, 31, 32, 39)	6%	2%
Non-Manufacturing		
Construction (SIC 15-17)	5%	7%
Transportation Services (SIC 42, 45)	4%	3%
Communication (SIC 48)	2%	2%
Utilities (SIC 49)	4%	1%
Wholesale Trade (SIC 50, 51)	5%	11%
Retail Trade (SIC 52-59)	4%	34%
Finance (SIC 60-62)	4%	4%
Insurance (SIC 63, 64)	4%	2%
Hotels (SIC 70)	5%	2%
Business Services (SIC 73)	4%	7%
Health Services (SIC 80)	4%	8%

Total unweighted observations = 3,173

Table 3
Distribution of Sample by Establishment Size

Number of Employees at Establishment	Unweighted Percentage	Weighted Percentage
20-49 Employees	17%	53%
50-99 Employees	15%	23%
100-249 Employees	19%	14%
250-999 Employees	29%	8%
1000 or more Employees	20%	2%

Total unweighted observations = 3,173

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